**Lesson Plan** Chapter 1 Day 1 **Technology Differentiation Critical Thinking**

**Course/Lesson Algebra 2** Introduction and 1.1 **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N2 Demonstrate that a number can be expressed in many forms

N5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

G1 Identifying, describing, comparing, constructing and classifying geometric figures in two and three

dimensions

G2 Representing and solving problems using geometric models and properties

G6 Demonstrating deductive reasoning and mathematical justification

P1 Model the concepts of variables, functions and relations

**Objective(s)** Class expectations

Familiarize student with textbook

Introduce online version give user names and pass codes

Use order of operations to evaluate expressions

Use formulas

**Opening :** Syllabus reading—Use Kagan groups to jigsaw

**Strategies:** Review Syllabus

Introduction to Text Book worksheet—Scavenger Hunt --edline

Examples p. 9 # 18, 26, 45, 47

**Critical Thinking/Questions:** Why is it important for students to know how to use their textbook?

**Closing:** Review getting to know your textbook worksheet.

**Assessment**: Skills practice page 4 (upload to Edline)

Signed syllabus acknowledgement.

Both in drop box---use One Note—don’t forget to save in PDF format

Last Name-Skills Practice p.4 before putting file in the drop box.

**Lesson Plan** Chapter 1Day 2 & 3

**Course/Lesson Algebra 2** 1.2 and 1.3 **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N2 Demonstrate that a number can be expressed in many forms

N 5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

A4 Solving algebraic equations

M2 Demonstrate an intuitive sense of measurement

M3 Estimate, compute and apply physical measurements

M4 Demonstrate the concept of measurement as it applies to real-world experiences

G1 Identifying, describing, comparing, constructing and classifying geometric figures in two and three

dimensions

G4 Using inductive reasoning to predict, discover and apply geometric properties and relationships

G6 Demonstrating deductive reasoning and mathematical justification

D7 Making inferences from data in charts tables and graphs

D8 Using logical thinking i.e. flow charts Venn diagrams and truth tables

**Objective(s)** Classify Real Numbers

Use the properties of real numbers to evaluate expressions

Translate verbal expressions into algebraic expressions and equations, and vice versa

Solve equations using the properties of equality

**Opening :** 5-minute check Power point slide number 15 (problems 1-5 only)

Review Skills selected problems from Practice page 4

**Strategies:**  Use VVWA ( Verbal and Visual Word Association) vocabulary Development---chart paper vocabulary term, visual representation, definition, personal association or characteristic on chart paper---use groups hang posters—Could use Frayer model also—non examples

examples Power point slides 16 - 33

Examples Power point slides 34 - 64

**Critical Thinking/Question:** Is the Distributive Property also true for division? Why or why not?

**Closing** Short write on critical thinking question…send to drop box on Edline (pdf file saved as

Last name-distributive property

**Assessment:** pp. 15-18 # 19 – 39 odd, 43-61 odd

pp. 24-25 # 19-25 odd, 29-69 odd

**Lesson Plan** Chapter 1 Day 4

**Course/Lesson Algebra 2** Quiz and 1.4 **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N 5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

G1 Identifying, describing, comparing, constructing and classifying geometric figures in two and three

dimensions

G6 Demonstrating deductive reasoning and mathematical justification

**Objective(s)** Evaluate expressions involving absolute values

Solve absolute value equations

**Opening** : 5 minute warm-up (answers not on next slide???)

Review selected problems from pp. 15-18 # 19 – 39 odd, 43-61 odd

pp. 24-25 # 19-15 odd, 29-69 odd

**Strategies:** Review homework---use think pair share

Power point slides 67 – 76

Quiz (p. 58—send to copier and request cut on dotted line)

**Critical Thinking/Questions** feedback on yesterday’s writing in math “Is the Distributive Property also true for division? Why or why not?”

**Closing :**  Is the Distributive Property also true for division? Why or why not?

**Assessment:** Practice 1-4 (upload to Edline pdf29 hardcopy 22)

**Lesson Plan** Chapter 1 Day 5

**Course/Lesson Algebra 2** Quiz and 1.5  **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

A4 Solving algebraic equations

G1 Identifying, describing, comparing, constructing and classifying geometric figures in two and three

dimensions

G6 Demonstrating deductive reasoning and mathematical justification

**Objective(s):** Solve inequalities

Solve real-world problems involving inequalities

**Opening**: 5 minute warm up Power point slide 77

Review selected problems Practice 1-4 (submit to drop box last name-Practice1-4)

**Strategies:**  Review quiz 1.2 and 1.3 from day 3

Examples Power point slides 78 - 90

**Critical Thinking/Questions:** 1. Determine whether each statement is sometimes, always, or never true. Explain your reasoning. If a and b are real numbers, then = + .

2. What is set builder and interval notation?

**Closing :** Quiz 1.3 (other half of page from Day 3)

**Assessment:**  Skills Practice 1.5 (PDF p. 35, Resource p. 28)

**Lesson Plan** Chapter 1Day 6

**Course/Lesson Algebra** **2** 1.6 and Review **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

G1 Identifying, describing, comparing, constructing and classifying geometric figures in two and three

dimensions

G6 Demonstrating deductive reasoning and mathematical justification

**Objective(s):** Review for test

Solve compound inequalities

Solve absolute value inequalities

**Opening:**  5 minute check Power point slide 92

Review selected problems Skills Practice 1.5—use groups based on skill level

**Strategies:**  Examples found on Power point slides 93 - 107

**Critical Thinking/Questions:** Does the Reflexive Property hold true for inequalities? (only for ≤ or ≥… 2 is not less than 2—see page 38)

**Closing:** Review pages 47-50—be sure to know how to use these pages

**Assessment**: page 51 # 1 - 30

**Lesson Plan** Day 7

**Course/Lesson** Ch 1 test and 2.1 **Algebra 2** **Teacher: Phoebe Solek**

**Standards and Benchmarks**

N2 Demonstrate that a number can be expressed in many forms

N3 Use number sense to estimate and determine if solutions are reasonable

N 5 Selecting and using appropriate computational methods and tools

N7 Justifying reasonableness of solutions and verifying results

A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations

A3 Use tables and graphs as tools to interpret algebraic expressions, equations and inequalities

A4 Solving algebraic equations

M1 Select and use appropriate units

M2 demonstrate an intuitive sense of measurement

M3 Estimate, compute and apply physical measurements

M4 Demonstrate the concept of measurement as it applies to real-world experiences

G1 Identifying, describing, comparing, constructing and classifying geometric figures in two and three dimensions

G2 Representing and solving problems using geometric models and properties

G4 Using inductive reasoning to predict, discover and apply geometric properties and relationships

G6 Demonstrating deductive reasoning and mathematical justification

P1 Model the concepts of variables, functions and relations

P2 Translating between tabular, symbolic or graphic representations of functions

D7 Making inferences from data in charts tables and graphs

D8 Using logical thinking i.e. flow charts Venn diagrams and truth tables

**Objective(s)** Assessment for Ch 1

Analyze and graph relations

Find functional values

**Opening :** review page 51 # 1 - 30

**Strategies:**  Intro to Ch 2 Power point slides Test Form 2C (PDF p.50-51 Resource p. 43-44)

Test Form 2D (PDF p.52-53 Resource p. 45-46)

Test Form 3 (PDF p. 54-55 resource p. 47-48)—more challenging

**Critical Thinking/Questions:** Find the value of *k* so that the equation below has the solution set {-3}.

3(2*x* - 1) = *x*(2 - *k*)

**Closing:** students submit test

**Assessment:** Skills Practice 2.1 (worksheet—upload to Edline)